

## MICHIGAN DEQ PUBLIC WATER SYSTEM SUPERVISION (PWSS) PROGRAM

### Workplan Summary and FY 2012 End-of-Year Evaluation

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**Federal funding used:** PWSS grant; Drinking Water State Revolving Fund (DWSRF) Set-asides: 1) Small System Technical Assistance set-aside, 2) Program set-asides of PWSS, Operator Certification, Source Water Protection, Capacity Development, and 3) Local Assistance set-asides that includes Wellhead Protection.

**FY 2012 End-of-Year Evaluation Synopsis:** In spite of diminishing resources for the PWSS program, Michigan DEQ continues to meet requirements to maintain primacy of the drinking water program, and public water systems continue to maintain acceptable compliance rates with drinking water regulations. Analysis of the various programs within Michigan's drinking water program (below), and the data gleaned from implementation of these programs (see attached Measures and Indicators), show that public health protection is the top priority. It is important to note that Michigan DEQ does not currently have adequate electronic reporting capabilities, due to competing priorities and resource limitations. IT support from the Department of Technology, Management and Budget, and financial/staff limitations within the PWSS program, are an ongoing obstacle.

**Rules and Primacy:** Michigan DEQ is implementing all of the drinking water rules. As of April 25, 2013, Michigan DEQ was granted full primacy for Long-Term 2 Surface Water Treatment Rule (LT2SWTR), Stage 2 Disinfection/Disinfection By-Products Rule (Stage 2 DBPR), Ground Water Rule (GWR), Lead and Copper Rule Minor Revisions (LCRMR) and Short-Term Revisions (LCRSTR).

For the past several years, Michigan DEQ disinvested in a number of program activities that will be partially implemented in FY 2013. Partial implementation includes:

1. Lead Consumer Notification of tap results at NTNTCWSs  
In the beginning of FY 2013, Region 5 worked with Michigan DEQ to establish a compliance assistance initiative to phase-in the notification of schools and daycares over a 3-year period of the lead consumer notice requirement. Systems will comply with the requirement and Region 5 will assist the State with ensuring compliance.
2. Consumer Confidence Report (CCR)  
Michigan DEQ continues to notify CWSs of the CCR requirements, and is issuing and reporting violations in FY 2013 for failure to produce and distribute a CCR.

The Region is pleased to see that Michigan DEQ is currently developing a plan to end the interim use of bottled water for arsenic noncompliance at NTNCWSs. Michigan DEQ is working with these systems to replace bottled water with a permanent solution to arsenic exceedances that will bring these 44 systems back into compliance.

Region 5 is tracking State reporting of new rule violations for the above rules. Currently, not all GWR violations are getting into the Federal database, SDWIS, for Community Water Systems (CWS) or Noncommunity Water Systems (NCWS), due to data management issues in both programs. The CWS data management system began entering the remaining GWR violations in August 2012, due to launch of SDWIS 3.1. A plan to temporarily upgrade WaterTrack to input GWR and other new rule violations into SDWIS is currently being developed. NCWS GWR violations may be entered by the end of FY 2013.

As of April 2013, Michigan DEQ reported:

- No LT2SWTR violations;
- 23 GWR Monitoring/Reporting (M/R) violations;
- 53 Stage 2 DBP M/R violations; and,
- No LCRSTR consumer notification M/R violations. The first set of Type 66 violations will be reported in October 2013. (Prior to FY 2013, Michigan DEQ had disinvested in this activity.)

Region 5 will continue to track reporting under new rules.

The Region would like to thank Michigan DEQ for its innovative design and diligent work to implement a pilot project to deliver the CCR electronically, and for Michigan DEQ's work with systems who wish to e-deliver their CCR due July 2013.

**Sanitary Surveys:** Michigan DEQ will maintain a baseline core of individuals with the technical expertise needed to perform sanitary surveys. Michigan DEQ will ensure that sanitary surveys are conducted periodically that, at a minimum, meet frequency requirements specified by rule. The Local Health Departments (LHD) are under contract by the State to perform sanitary surveys at all NCWSs. The LHDs are reviewed by the State periodically, but not less than annually. Region 5 will track State commitments to conduct sanitary surveys within the Federally required intervals. The April 2013 numbers report that:

- SURFACE WATER SYSTEMS: 92.93% (276/297) of the sanitary surveys at Subpart H systems were completed between CY 2009 and CY 2011. (State committed to 94%) This commitment was most likely not met due to district staff turnover and possibly State policy, which the State reviewed. For the time period between CY 2010 and CY 2012, 95.3% (282/297) sanitary surveys at Subpart H systems were completed. (State committed to 94%) Strong improvement noted!
- GROUND WATER SYSTEMS: For the time period CY 2010-2012 for CWSs, Michigan DEQ reported 95.2% complete; and for the noncommunity systems, Michigan DEQ reported 98.9% complete for nontransient noncommunity water systems (NTNCWS), and 98.3% complete for transient noncommunity water systems (TNCWS). Commendable!

A downward trend in the number of NCWS sanitary surveys older than 5 years began ten years ago, and at the end of FY 2011, it was measured at 1%. This trend is most likely the result of: Michigan DEQ's annual evaluation process when any survey backlog is highlighted; and, national/Regional emphasis not to exceed the 5-year mark which has led to closer scrutiny by the LHDs and the State. The State's practice of distributing each LHD's progress to all LHDs quarterly, may contribute to maintain or continue to decrease the number of sanitary surveys older than 5 years. Region 5 applauds MDEQ's efforts!

**Laboratory Certification:** The State is expected to maintain: (1) certification for the principal State laboratory, (2) a certification program to certify commercial labs within the State, and (3) a process for ensuring capacity to analyze at the principal State lab or commercial labs for all parameters that are required to be sampled in the State. Laboratory certification responsibilities in Michigan are undertaken by the Michigan DEQ Laboratory and radiological parameters are analyzed by the Wisconsin State Lab of Hygiene. Michigan DEQ ensures all results used for compliance with the Safe Drinking Water Act (SDWA) are analyzed by certified labs. Michigan DEQ agrees to ensure all laboratories that produce results for compliance with the SDWA are recertified at least once every three years and will meet all requirements of 40 CFR parts 141 and 142.

In March 2012, the Region 5 Certification Team conducted an on-site review of the Michigan Laboratory Certification Program. Findings include the need for improvement in communication with the Drinking Water Program staff. Also, the Region has concerns about the limited Laboratory Certification staff to handle 172 commercial laboratory audits. These issues have been addressed by the Laboratory Director.

After an on-site evaluation by U.S. EPA Region 5 in March 2012, Michigan DEQ Laboratory was granted full certification for chemical and microbiological analyses on December 21, 2012. This certification will last for 3 years, and will expire on December 21, 2015. Congratulations!

Michigan DEQ has been developing eDWR, a data system that will report data from private laboratories to the State. In the March 2012 Laboratory audit, U.S. EPA found that a large portion of the noncommunity sample data from private laboratories is hand-entered by LHD staff, and the community program is having issues with mapping and importing data into SDWIS/State, so data must also be entered into program databases manually. Michigan DEQ is strongly encouraged to focus IT resources to complete eDWR. A FY 2014 completion date is planned. Upon completion, eDWR will improve the timeliness issue of State's receipt of private labs results, of reporting positives to the State promptly, and improve data quality.

**Compliance and Enforcement Management:** Region 5 tracks State commitments under the OECA measure SDWA02 and updates Michigan DEQ quarterly. In July 2011, Michigan's 2012 commitment was to address or resolve 18 systems with ETT scores of 11 or more. The October 2012 report showed 46 systems addressed, more than double its commitment. Commendable!

MDEQ is commended for:

- Michigan Attorney General successfully litigated complaint filed in State Court to enforce Administrative Order MDEQ issued to Lakepark Village Condominiums for un-resolved Arsenic

MCL violations in 2006; system subsequently installed treatment and returned to compliance October 2012.

- referring a CWS with Arsenic MCL and M/R violations, CCR and quarterly TCR M/R violations, for higher State level review (SF2);
- issuing Administrative Penalty (SFM) to a CWS with repeat TCR M/R violations, a CWS with PN violation (for TCR MCL violation), and 8 CWSs with a CCR violation;
- issuing formal NOV to NCWSs with a repeated quarterly TCR M/R violator (3 systems), TCR MCL and M/R violations (1 system), TCR and Nitrate annual M/R violations (2 systems);
- conducting a show cause hearing (SFN) for a TCR MCL violator, and a repeated TCR quarterly M/R violator (Administrative Penalty also issued);
- issuing 71 Administrative Penalties to 58 NCWSs (54 TNCWSs and 4 NTNCWSs) for M/R violations by 8 LHDs; and,
- providing detailed system specific compliance/enforcement updates in response to the quarterly letter/report and using this report to communicate system-specific implementation and enforcement response instructions to LHDs.

Area That Needs Further Attention:

- No Administrative Orders were issued to NCWSs.

Michigan DEQ referred 2 NCWS for enforcement to Region 5 in FY 2012. This was an increase from 1 referral in FY 2011, but less than the 4 referrals in FY 2010. In FY 2012, no Bilateral Compliance Agreements were issued to NCWSs.

**Data Management and Reporting:** Michigan DEQ maintains a data management system that tracks requirements for all rules and serves as the central store of data reported by laboratories, field offices and LHDs. However, Michigan DEQ does not currently have adequate electronic reporting capabilities, due to competing priorities and resource limitations. IT support from the Department of Technology, Management and Budget, and financial/staff limitations within the PWSS program, are an ongoing obstacle.

The CWS program uses SDWIS/State 3.1 (the State hopes to move to SDWIS/State 3.2 by summer 2013), and FedRep 3.31, (the State hopes to move to FedRep 3.4 by summer 2013), and the NCWS program uses WaterTrack and FedRep 3.3 to report actions and sample data to EPA quarterly, and inventory data at least annually in accordance with 40 CFR 142.15. CWSs began reporting ground water sanitary surveys in February 2013. Now that SDWIS 3.1 is in production, reporting for all new rule requirements is possible for CWSs. CWS program is using CDS for TCR, LCR and some Stage 1 monitoring; MDEQ began using CDS for Stage 2 TTHM/HAA5 reporting in FY 2013.

The NCWS program is continuing its use of WaterTrack, as it prepares to move its data to SDWIS/State in 2014. Currently, WaterTrack is unable to report new rule data for the Lead and Copper Rule; and can only partially support tracking and reporting for the Ground Water Rule and the Disinfection/Disinfection By-Products Rule. Consequently, the Region would like to work with the State to develop an interim reporting method to ensure violations for these rules are entered into SDWIS prior to 2014.

The reporting schedule for States to the national database, SDWIS/Fed-ODS, is quarterly. If the data is not reported within 60 days, Region 5 raises the issue to the State Director's attention. Michigan DEQ continues to meet most of the quarterly reporting dates. Great improvement!

It is also important for the State to correct identified errors in the database in a timely manner. The Region requests that the State prioritize correcting inventory errors, open-ended violations linked to SOX codes in ODS, reporting the missing 70 NTNCWS locational data, and reporting the missing 8 source water system facility, and 16 treatment plant address locational data.

Region 5 is tracking late reporting of TCR and nitrate violations, and arsenic non-compliance at CWSs and NTNCWSs. Michigan DEQ timeliness in reporting these violations has improved from 2011 to 2012. In 2011, 89.1% of the TCR monitoring/reporting (M/R) violations were reported on-time, (and 7% were reported up to 2 quarters late); and 89.6% of the nitrate M/R violations were reported on-time, (and 4.9% were reported 1 quarter late). In 2012, 95.6% of TCR M/R violations and 100% of the nitrate M/R violations were reported on-time. Regarding arsenic maximum contaminant level (MCL) violations, the data as of January 2013 indicates 99.71% CWSs and 97.3% NTNCWSs were in compliance, where 47 CWSs with a population of 1,058, and 36 NTNCWSs with a population of 3,088) had arsenic MCLs that were not returned to compliance. Improvement has been noted in returning systems with arsenic MCL violations to compliance. Commendable!

**Operator Certification:** Michigan DEQ established and implemented minimum professional standards for the operation and maintenance of public water systems to ensure that trained and certified professionals are overseeing the treatment and distribution of safe drinking water and to promote compliance. Michigan DEQ provides documentation to EPA annually, September 30<sup>th</sup> each year, to show the ongoing implementation of the operator certification program to avoid 20% withholding of the DWSRF grant. The FY 2012 Operator Certification report was received on September 25, 2012. The expense reimbursement grant (ERG) ended on December 30, 2012. Michigan DEQ was able to expend their remaining ERG funds by this date. The final ERG report was received on May 16, 2013.

At the Eastern Regional Operator Certification Workshop held in Chicago in June 2012, Asset Management was highlighted as a critical component of a water system's operations. Please continue your efforts to ensure that water treatment operators maintain a strong focus on Asset Management.

EPA is concerned about the workforce losses of water treatment operators through retirements. EPA has signed a Memorandum of Understanding with the U.S Department of Veterans Affairs (VA) to promote the recruitment of veterans for employment at water and wastewater utilities. EPA recommends that Michigan DEQ encourage water systems to take advantage of the VA's offerings that will benefit returning veterans and water systems.

**Capacity Development:** Michigan DEQ ensures that new and existing CWSs/NTNCWSs can demonstrate technical, managerial, and financial capacity to operate in compliance with Federal and State regulations. Michigan DEQ provides documentation to EPA annually, December 30<sup>th</sup> each year, to show the ongoing implementation of the new systems program and the existing systems strategy to avoid 20% withholding of the DWSRF grant. Of the 46 new CWS/NTNCWS that became active during FY 2010-2012, only 1 CWS was considered a high priority for enforcement (had a score of 11 or more on the Enforcement Tracking Tool (ETT)).

Activities taken by the Michigan DEQ to strengthen system capacity include:

- Two control points, construction permit and final inspection, are used to ensure that new public water systems demonstrate technical, managerial, and financial (TMF) capacity.
- For NTNCWSs, the LHDs issue the construction permit, review/approve the financial and managerial plan, and conduct the final inspection. A certified operator must be designated prior to initiating operation.
- Capacity assessment of existing systems is conducted through sanitary surveys, on-site surveillance visits and the construction permit process, where one-on-one technical assistance/consultation is provided by Michigan DEQ field staff.
- Michigan DEQ conducts other programs and activities that are implemented in the State to assist systems gain Technical/Managerial/Financial (TMF) capacity. The State also promotes USEPA tools such as CUPSS, to assist systems gain TMF capacity.
- The State assists existing water systems improve their financial capacity by conducting financial assessments for systems with less than 10,000 population that request assistance(funded through Technical Assistance set-aside), and for systems with greater than 10,000 population that request assistance(funded through the Capacity Development set-aside).

**Ground Water and Source Water Protection:** Michigan DEQ annually reports the number of CWSs with Source Water Protection (SWP) plans and the population served by CWSs with minimized risk due to SWP. Even though source water protection is voluntary in Michigan, Michigan DEQ exceeded its 31% target (32.4%) in FY 2012 to ensure CWSs have SWP plans. Though improvement from FY 2011 is noted, MDEQ did not meet its target of 87% of the population served by CWSs with minimized risk due to SWP. Michigan DEQ recommends that SWP plans be updated every 3 to 5 years, especially in prioritized areas.

Michigan DEQ is currently working towards updating source water assessments using the Michigan Ground Water Management Tool (MGMT), an innovative tool that uses information from the Wellogic water well record system to perform particle tracking and delineate WHP areas. Eventually, Michigan DEQ would like to use this tool to identify the wellhead protection area for all CWS and NTNCWS in Michigan. This effort is also contributing to the update of source water assessments with a shift in focus from isolation areas for wells to the wellhead protection area. In the future, it is anticipated the MGMT will be used to complete source water assessment reports for new public water systems. The source water assessments can then be used by the Michigan Rural Water Association to write SWP plans. Currently, Michigan DEQ is updating SWAs that were completed more than 10 years ago, for systems in the Kalamazoo, Grand Rapids, and Cadillac Districts (3 out of 8 districts in Michigan).

Michigan DEQ has a Wellhead Protection (WHP) Program which offers a 50/50 grant to CWSs to develop a WHP plan. This program has been very successful, though funding for this program has decreased over the past 12 years. Using the WHP 50/50 Grant Program as a template, Michigan DEQ developed a Surface Water Intake Protection (SWIP) Program that incentivizes participation in the development of a SWIP plan with 50/50 grants (through the Local Assistance Capacity Development set-aside), though implementation has been hindered due to a lack of resources. Excellent innovative thinking!

**Measures and Indicators:** There are multiple national measures in the National Program guidance that support the “water safe to drink” subobjective 2.1.1 in EPA’s strategic plan, and Region 5 is also tracking several other measures, including those in the Logic Model Reporting Tool, Regional Shared Goals, and Regional High Priority queries. The most recent data for Michigan for each of these measures are

attached, some of which have been described in this work plan summary; and are also available via the “Measures and Indicators” link.

The Logic Model Reporting Tool data for FY 2013, which will provide violation detail, will be reported in July. MDEQ met all of the health-based National Program Measures; though increased SWP is indicated (SWP is voluntary in Michigan and is funded as resources allow), and utilization of the DWSRF set-asides requires improvement. The Region 5/State Shared Goals, which are more specific, indicated the Noncommunity program is improving by decreasing the number of violations, while the CWS program should work towards decreasing monitoring violations.

- The number of NTNCWSs meeting Health-Based standards increased slightly, though the State did not meet its target (improvement noted);
- The percent of TNCWSs meeting Health-Based standards increased slightly; and the State met its target;
- The percent of NTNCWSs with significant/major Monitoring violations for chronic contaminants decreased noticeably, and the State met its target.
- The percent of TNCWSs with significant/major Monitoring violations slightly decreased, and the State met its target.

#### IMPROVEMENT NEEDED:

- The percent of population and number of CWSs with significant/major Monitoring violations increased noticeably; however the State still met its target;
- The percent of NTNCWSs with significant/major Monitoring violations for acute contaminants increased noticeably, and the State did not meet its target.

**Resources and Expertise:** Michigan DEQ maintains a baseline core of individuals with the technical expertise to carry out all mandatory components of the PWSS program (including engineering plan and specification review and emergency response.) Contracts with the LHDs ensure implementation of the SDWA at NTNCWSs and TNCWSs, with oversight provided by Michigan DEQ. Michigan DEQ develops and implements a plan to provide adequate funding to carry out all functions of the PWSS program. Region 5 tracks the progress related to State and EPA efforts to obtain additional resources necessary to enable Michigan DEQ to engage in resolving program discrepancies.